ACC.11
60th Annual Scientific Session & Expo

E921
JACC April 5, 2011
Volume 57, Issue 14

MYOCARDIAL ISCHEMIA AND INFARCTION

CARDIAC TROPONIN ELEVATION PATTERN FOLLOWING PERCUTANEOUS CORONARY INTERVENTION FOR PATIENTS WITH ST ELEVATION MYOCARDIAL INFARCTION.

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
Sunday, April 03, 2011, 10:00 a.m.-11:15 a.m.

Session Title: Myocardial Ischemia/Infarction -- Basic
Abstract Category: 1. Myocardial Ischemia/Infarction–Basic
Session-Poster Board Number: 1001-331

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Background: Cardiac troponin release kinetics has been well characterized during the thrombolytic era and was found to be a reliable predictor for infarct size and post-infarct complications and prognosis. Data regarding troponin elevation following percutaneous coronary intervention (PCI) for ST elevation myocardial infarction (STEMI) is still scarce.

Methods: We prospectively collected cardiac troponin I levels from blood samples of 175 consecutive patients hospitalized with STEMI and underwent PCI. Clinical, electrocardiographic and echocardiographic data were obtained for all patients. Mean peak troponin levels and the mean time until the peaking of troponin were calculated for the entire study cohort.

Results: the mean peak troponin I level was 69 µg/L and the mean time from its first measurement until its peaking was 9 hours. Later peaking was associated with TIMI flow grade of 0/1 at the initiation of angiography, with lack of regression of > 70% in the ☒ST-elevation on the ECG obtained immediately after PCI and at 60 minutes thereafter. Higher peak values were associated with a TIMI flow grade of 0/1 either at the initiation of angiography or at the end of the PCI procedure, with lack of regression of >70% in the ☒ST-elevation at the end of the PCI and at 60 minutes thereafter. Higher peak levels were also positively associated with lower ejection fraction at discharge, with cardiogenic shock and with ventricular arhhythmias occurring > 24 hours of hospitalization.

Conclusions: Cardiac troponin elevation kinetics following PCI for STEMI is a simple and reliable method for the prediction of infarct size and infarct-associated complications. Timing of the peaking is influenced by the presence or lack of early reperfusion.